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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/830,756	11/27/2001	Heinz Epping	GK-EIS-1041 /500593.20033	2148
26418	7590	04/15/2004	EXAMINER	
REED SMITH, LLP ATTN: PATENT RECORDS DEPARTMENT 599 LEXINGTON AVENUE, 29TH FLOOR NEW YORK, NY 10022-7650			HARVEY, DIONNE	
			ART UNIT	PAPER NUMBER
			2643	

DATE MAILED: 04/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/830,756

Applicant(s)

EPPING ET AL.

Examiner

Dionne N Harvey

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☐ Claim(s) \_\_\_\_ is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 22-29, 38, 39 and 41 is/are rejected.
- 7) ☐ Claim(s) 30-37 and 40 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to under 37 CFR 1.83(a) because they fail to show width of the sound inlet as described in page 8 of the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore:

- a. The “width” of the sound inlet which is determined along the periphery of the microphone, as recited in claims 25 and 26;
- b. The “closure element”, and the associated “mouth”, and “opening” of the “closure element” as recited in claim 29

...Must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 25,26,29 and 38 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

- a. Regarding claims 25 and 26, the specification fails to clearly describe how one of ordinary skill in the art would determine the "width" of the sound inlet by reference to the periphery of the microphone.
- b. Regarding claim 29, the specification fails to enable one of ordinary skill in the art to construct a damping element further comprising a closure element in the front mouth of the sound duct and with an opening corresponding to the mouth opening of the sound passage. Clarification is required.
- c. Regarding claim 38, on page 10, lines 22-25, the specification teaches a second embodiment which is illustrated in figures 5 and 6, the "diaphragm fixing portion" (5) is positioned opposite the "diaphragm holding portion" (37). However, it is unclear from the applicant's disclosure how the "diaphragm fixing portion" (5) of figures 5 and 6 operates to "fix" the

diaphragm. Instead, it appears that the "diaphragm fixing portion" (5) actually operates to "fix" the magnetic circuit of the microphone.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 27,29 and 38 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- a. Regarding claim 27, What is meant by "interrupted" ?
- b. Regarding claim 29, does the "closure element" refer back to the "damping element" of claim 23 or is it a separate element? ; This claim is misdescriptive since it is unclear how the "closure element" operates to "close" if it is provided with an opening ; Claim 29 recites the limitation "the mouth opening of the sound passage" in line 3. There is insufficient antecedent basis for this limitation in the claim. Clarification OR cancellation is required.
- c. Regarding claim 38, With reference to figures 5 and 6, the "diaphragm fixing portion" (5) appears not to "fix" the diaphragm and is therefore misdescriptive.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 22-29 and 38,39 and 41 are rejected under 35 U.S.C. 102(b) as being anticipated by Hagey (US 4,410,770).

Regarding claim 22, in figure 1, Hagey teaches a microphone comprising a diaphragm (48) having a first surface, being in the direction of the ambient air, and second surface being in the direction of the microphone housing; the first surface oriented toward the sound source (originating from ambient) and the second surface which is at least partially acoustically separated from the first surface via mounting at its' perimeter portion to the end surface (38) of ring (36), the second surface facing away from the sound source; at least one slot-shaped sound inlet (45) through which sound waves pass to the second surface forming an acoustic inductance so that the passed sound waves have a delay; and at least one damping element (68); said sound inlet having an acoustic resistance being less than the damping element; and wherein the sound waves first pass through said slot-shaped sound inlet (45) before reaching said at least one damping element (68).

Regarding claim 23, Hagey teaches that the damping element is formed by a sound passage (62) provided with acoustic damping material (68) and which connects a cavity (73) to the volume (102) delimited by the second diaphragm surface.

Regarding claim 24, Hagey teaches that the sound inlets have a substantially rectangular cross section (see aperture 46).

Regarding claim 25, Hagey teaches that the height of the inlet (45) is less than the length via beveled surface (34), that sound flow is along a longitudinal direction, and as best understood with respect to the U.S.C. 112 first paragraph rejection above, Hagey appears to teach that the length of the inlet is less than the width.

Regarding claim 26, as best understood with respect to the U.S.C. 112 first paragraph rejection above, Hagey appears to teach that the width of the sound inlet corresponds to the periphery of the microphone.

Regarding claim 27, as best understood with respect to the U.S.C. 112 second paragraph rejection above, Hagey appears to teach that the sound inlet is interrupted only by support portions.

Regarding claim 28, Hagey teaches that the peripheral edge of the diaphragm (50) is fixed to diaphragm fixing portion (36,38).

Regarding claim 29, as best understood with regard to the U.S.C 112 first and second paragraph rejections above, Hagey appears to teach a closure element arranged in front of a mouth of a sound duct having an opening substantially corresponding to the mouth opening of the sound passage and which is provided with acoustic damping material.

Regarding Claim 38, as best understood with regard to the U.S.C 112 first and second paragraph rejections above, Hagey teaches that the sound inlet (45) is disposed between the diaphragm fixing portion (36,38) and a holding portion (54) on the

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diaphragm. Given the broadness of the claimed "holding portion", the Examiner has interpreted the bobbin member as the "holding portion" of the claim.

Regarding Claim 39, Since bobbins are well known in the art as being annular in shape, the Examiner as interpreted the annular bobbin as providing the "ring" of the claim.

Regarding Claim 41, Hagey teaches the sound inlet being formed between the diaphragm fixing portion (36,38) and a casing portion (14,72) which substantially encloses the second diaphragm surface.

### ***Allowable Subject Matter***

Claims 30 and 40 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 31-37 are objected to due to their dependency upon claim 30.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dionne N Harvey whose telephone number is 703-305-1111. The examiner can normally be reached on 9-6:30 M-F and alternating Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis Kuntz can be reached on 703-305-4708. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dionne Harvey, Examiner



HUYEN LE  
PRIMARY EXAMINER